DOCUMENT RESUME

ED 293 799 SP 030 088

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TITLE The Quality of Teacher-Education Students: Do Native and Transfer Students Differ?
PUB DATE Feb 88
NOTE 33p.; Paper presented at the Annual Meeting of the Association of Teacher Educators (San Diego, CA, February 13-17, 1988).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Aptitude; *Admission Criteria; *Affective Measures; *College Transfer Students; *Education Majors; Higher Education; Preservice Teacher Education; *Student Attitudes; Student Characteristics; Teacher Education Programs

ABSTRACT

The primary purpose of this study was to determine if transfer students reduced the quality of 547 prospective teachers who were beginning their teacher training at Bowling Green State University (Ohio) during either the spring semester of the 1984-85 or during the fall semester of the 1985-86 academic years. Aptitude, basic academic skills, and affective measurements were obtained and compared for the intra-institutional transfers (N=176), the inter-institutional transfers (N=48) and the native students (N=323). It was found that these three groups did not differ to any appreciable extent on the set of affective measures (anxiety, attitude, and concerns about teaching) but that there was a definite trend for the intra-institutional transfers to be superior to both the native and inter-institutional transfers, and for the native students to be superior to the inter-institutional transfer students on the aptitude (ACT) and achievement (CTBS) measures. It was concluded that the quality of teacher-education students may be reduced if late entrants to teacher training, and in particular inter-institutional transfers, are permitted to circumvent normal institutional admission procedures. (Author)

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ED293799

The Quality of Teacher-Education Students: Do Native and Transfer Students Differ?

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A research paper presented at the annual meeting of the

Association of Teacher Educators
San Diego, California
February 14-17, 1988

Running Head: NATIVE AND TRANSFER STUDENTS

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Abstract

The primary purpose of this study was to determine if transfer students reduced the quality of 547 prospective teachers who were beginning their teacher training at Bowling Green State University during either the spring semester of the 1984-85 or during the fall semester of the 1985-86 academic years. Aptitude, basic academic skills, and affective measurements were obtained and compared for the intra-institutional transfers (n = 176), the inter-institutional transfers (n = 48) and the native students (n = 323). It was found that these three groups did not differ to any appreciable extent on the set of affective measures (anxiety, attitude, and concerns about teaching) but that there was a definite trend for the intra-institutional transfers to be superior to both the native and inter-institutional transfers and for the native students to be superior to the inter-institutional transfer students on the aptitude (ACT) and achievement (CTBS) measures. It was concluded that the quality of teacher-education students may be reduced if late entrants to teacher training, and in particular inter-institutional transfers, are permitted to circumvent normal institutional admission procedures.

The Quality of Teacher-Education Students: Do Native and Transfer Students Differ?

Few educators doubt that quality education is dependent upon quality teachers and that the quality of teachers is highly dependent upon the recruitment and selection of competent teacher trainees. However, the research literature clearly indicates that education has been less effective than other fields in attracting its share of academically competent candidates to the profession (Shields & Daniels, 1982). Perhaps contributing even further to the problem of attracting academically talented candidates to the profession are the late entrants to the field who typically circumvent the normal selection and retention process, namely, temporary certificate applicants, degree holders seeking teacher certification, and late transfers to teacher training programs. The research literature provides scant information about these late entrants to the field and how they might influence the quality of teachers in the field. The impact of late entrants upon teacher candidate quality, if any, is likely to be especially significant in the immediate future; for in past periods of teacher shortages the number of late or alternate entrants to the field tended to increase rather dramatically.

According to Webb (1971), most of the research on student transfers within higher education through the 1960's was limited

to studies of junior college transfers to senior institutions. After completing a rather extensive review of this literature, he described the research in terms of the variables commonly studied, the types of transfers common in higher education, and typical conclusions reached by the researchers. He stated that four types of student transfers traditionally occur in higher education and that student ability, personal attributes, and subsequent academic performance vary among these types of transfers. The four most common types of transfers were described as: junior to senior college, four-year schools to other four-year schools, intra-institutional academic program changes, and transfers between degree level programs (e.g., associate to baccalaureate degree). Variables related to the success of student transfers most often investigated in these studies were: grade point average at the host institution, graduation rates, attrition rates, time required before graduation, status of student (e.g., on probation), honors received upon graduation, aptitude scores, grade point average prior to transfer, and high school performance indices of ability. Relative to research on the junior college to four-year school transfers he concluded that their grade point average declined during the first term after the transfer (found to be true in 44 of 46 studies), that their grade point average tended to increase in second or subsequent terms (found to be true in 34

of 38 studies), that the accumulative grade point average at the host school was lower for the transfer students as compared to the native students (found to be true in 22 of 23 studies), and that transfer students had higher attrition rates and took longer to graduate as compared to native students (found to be true in 19 of 21 studies). In a related study done in the late 1960's, Hecker and Lezotte (1969) found significant gains in grade point average for transfers from four-year to two-year programs but equivalent or lower grade point averages for transfers between degree programs at the same level or for transfers from two-year to four-year programs.

Many of the early studies of the academic success of transfer students investigated the personality related characteristics of the native and transfer students as well as the various types of transfer or dropout situations. For example, Maudal, Butcher, and Mauger (1974) concluded that transfer students were more like persisting students than dropouts. They found that personality variables were stronger predictors of those students who chose to transfer than were academic variables; whereas academic variables were found to be stronger predictors of those students who chose to discontinue or drop out of their schooling.

Marks (1970) noted a particular lack of research on intra-institutional university transfers of whom he stated were

by far the most frequent type of college student transfer. He reported that from 50 to 80% of all students make an intra-institutional transfer (major change) at some point in their college years. In his own study of a large sample of university students he found personality, cognitive, and academic performance differences between the intra-institutional transfers and students remaining in their original major field of study. He did not, however, find differences between the measured academic aptitude of the two groups although the grade point averages of the intra-institutional transfer students were lower than those of the persisting students. Similarly, Holland and Nichols (1964) in a longitudinal study of national merit finalists found that the students who did or did not change majors were distinguishable in terms of some aptitude, achievement, or personality characteristic. The reasons given by the national merit finalists who chose to make academic program changes were, from most to least frequent: lack of interest in the initial course content, appeal of future occupational opportunities, feeling different from most students in their initial major, and lack in one or more specific aptitudes needed for achievement in their initial major. These researchers additionally concluded that their findings lent support to the vocational theory generalizations that "people oriented students" would more comfortably "fit in" with other people oriented

students in a people oriented field of study and that remaining in a given field is associated with having personality attributes commonly associated with people in that field.

More recent studies of college student transfers have produced results generally comparable to the research findings reported in the 1960's and early 1970's. Holahan, Green, and Kelley (1983) reported the findings of a six-year longitudinal study of a sample of nearly 3,500 student transfers to a senior college campus. They concluded that: a) Transfers were as likely to complete degree programs as native students. b) Male transfer students were more likely to graduate than female transfer students. c) Female transfer students earned higher grade point averages than did male transfers. d) Transfer students not graduating had lower grade point averages than those graduating, but academic failure was seldom found to be the cause of attrition. And, e) junior college transfers had lower final grade point averages than did senior college transfer or native students; whereas these latter two groups had comparable grade point averages. Durrio, Helmick, and Slover (1982) after a study of a large sample of transfers to the field of engineering reported similar findings: a) Junior college transfers did less well than four-year college transfers in terms of grade point average, and the student transfers as a total group (including all types of transfers) did less well than native students.

b) Native and transfer student had similar academic aptitudes. And, c) grade point average at the time of transfer was the best predictor of achievement at the host institution, but motivation and study habits were the best predictors of attrition rate.

In another study the investigators examined a somewhat different set of variables associated with college transfers. Holahan and Kelley (1978) chose to study the general institutional adjustment of a large group of transfers. They found that differences in student adjustment were associated with the types of transfer made but not with institutional size. They also found that transfers from four-year private institutions as compared to transfers from public institutions felt more able to cope with academic demands, felt more competent, and felt better prepared in arts and languages. The transfers from four-year public colleges reported being more able to cope with the self-assertion demands of the host institution; whereas the transfers from two-year public schools were less able to cope with these demands. The transfer students from two-year colleges earned the lowest grade point averages at their new four-year institution; whereas academic performance was comparable for the four-year public and private school groups of transfer students at their new four-year institution. These researchers also concluded that academic failure or low grades did not appear to be a major factor in student transfers. This latter conclusion

was also reported by Hendel, Teal, and Benjamin (1984) who investigated the rationale underlying the deliberations of a group of transfer students and a group of students who had seriously considered but did not make a transfer. Only four percent of each of these two groups noted poor grades as a reason for considering or making a transfer.

Transfers within the Field of Education

Very few studies were identified that addressed specifically the transfer of students into or from teacher training programs; however, the results of these few studies do appear to be consistent with the results of the studies of other college student transfer populations. Contrary to what one might expect, few of the available studies of student transfers into education had addressed personality or attitudinal variables which are commonly thought to be of significance to the professional performance of teachers. Suddarth (1971) conducted a study of transfers into the School of Humanities, Social Science, and Education at Purdue University. She found differences in aptitude (SAT) and grade point average among the types of transfers to the School, namely inter-institution, intra-institution, and regional campus transfers. Inter-institution transfers performed highest (even higher than native students), intra-institutional transfers performed next highest (comparable to native students), and regional campus transfers

performed lowest of all groups in terms of grade point average earned at the host institution. Additionally, she found that women transfer students earned higher grade point averages than did the males despite having lower SAT scores as a group, and she found that this gender difference in grade point average remained even when the gender groups were equated statistically on the basis of SAT scores (math and verbal scores) and high school graduating rank. Henderson, McMillin, and Gufford (1974) compared the student teaching performance of junior college transfers with the performance of native students. Neither college coordinator nor directing teacher ratings on a 23-item competence scale revealed a significant difference between the two groups. A significant difference, however, was found between the two groups in graduation rate favoring the native students although only four of the 80 transfer students not graduating failed to do so for academic reasons. Thus, as was found in studies of other student transfer populations, academic factors were not good predictors of attrition among the transfer students.

Klitzke (1961), in an earlier study of the academic success of junior college transfers to teacher training at Colorado State College in Greeley, found that although the native and transfer students were comparable on initial grade point average, academic aptitude, and high school graduation ranks they had significantly

different attrition rates and grade point averages earned at Greeley. The native students as compared to the transfer students in this study had a higher graduation rate and a higher earned grade point average in the last two years of study. He also reported that the grade point average for the dropout students in the transfer group was higher than the grade point average for the dropouts in the native sample of students; thus again suggesting that personality factors rather than academic factors are associated with student attrition. And in a second early study of teacher education transfers, Parkinson (1964) reported a study of intra-institution transfers between the College of Arts and Science and the School of Education at Miami University. Limited quantitative data were presented in the report itself; however, he concluded that attitude and related factors and not ability best characterized the differences between the students transferring from or into the two colleges. High and low aptitude students transferred both ways, but a tendency beyond probability was noted for relatively more Arts and Science students with aptitudes below the 50th percentile rank as well as within the 80 to 90 range to transfer to the School of Education and for those within the 90 to 99th percentile range to transfer out of the School of Education to the College of Arts and Science. Thus, this was another study suggesting that personality factors are associated with student

transfer decisions and also suggesting that the transfers to and from teacher training may reduce the academic quality of teacher candidates.

In summation, the findings from the review of literature would suggest several generalizations of possible significance to those needing to make decisions about students transferring into teacher education: a) Transfer students are generally successful but tend to have a higher attrition rate and to earn a lower grade point average at the host institution. b) The higher attrition rate of transfer students is better explained by personality than academically related factors. c) Achievement of transfer students at the host institution can best be predicted by their previous grade point average. d) Personality characteristics and vocational considerations rather than academic performance are better predictors of whether or not a student will choose to transfer or to discontinue his education. e) The success of transfers varies by nature of student's original institution, namely (from least to most likely to be successful): regional campus, two-year college, four-year college, and intra-institution transfers. f) Women transfers (even though they may have somewhat lower aptitude scores) tend to earn higher grades than do men transfers but have higher attrition rates at the host institution. g) Findings related to the success of transfer students appear to be similar across

major fields of study. And, j) very few studies have been conducted on students transferring to teacher training; these few studies do suggest, however, that transfers into education may reduce the academic quality of teacher candidates. It should also be noted that these studies did not address any personality and affective factors normally thought to be associated with success in a teaching career.

Purpose

This investigation was designed to contribute to the currently meager knowledge of both the academic and the affective characteristics of students transferring into teacher training. Specifically, it was the purpose of this study to determine whether or not late entrants into teacher training (transfer students) reduce the quality of teacher candidates.

Hypotheses

The general overall problem for this investigation was to ascertain whether there were differences between native and transfer students in academic aptitude, basic academic skills, and affective characteristics. Eight null hypotheses were tested; it was hypothesized that the native students, the inter-institutional transfer students, and the intra-institutional transfer students would not significantly differ when compared on the following measurements: 1) American College Test (ACT), 2) Comprehensive Test of Basic Skills (CTBS), 3) Teaching

Anxiety, 4) Attitude Towards Teaching as a Career, 5) Concerns About Teaching, 6) reasons given for deciding to become a teacher, 7) self ratings of assurance in their decision to teach, and 8) self ratings of their probable future effectiveness as a teacher.

Method

Sample

All students (N = 547) registered in a required orientation to the field of education course at Bowling Green State University (BGSU) during the spring semester of the 1984-85 and during the fall semester of the 1985-86 academic years were the subjects for this study. Three separate groups of students within this sample were identified: a) "native" students (n=323), students who had declared their major to be education upon their initial admission to BGSU as entering freshmen; b) "intra-institutional" transfers (n=176), students who were admitted to BGSU as entering freshmen but who had not initially declared education as their major field of study; and c) "inter-institutional" transfers (n=48), students who transferred into the College after having completed a year or more of academic work at an institution other than BGSU. Approximately 80% of the sample were female with approximately the same percentage being classified as either freshman or sophomores, and approximately 37% of the sample were planning to

be elementary teachers, 27% secondary teachers, 20% special education teachers, and 16% specialized area teachers (e.g., art, music, etc.).

Instrumentation

The Comprehensive Tests of Basic Skills (CTBS), the Teacher Concerns Questionnaire (George, 1978), the Attitude Toward Teaching As a Career Scale (Merwin & Divesta, 1959), and the Teaching Anxiety Scale (Parsons, 1973) were administered to the students. American College Test (ACT) scores were obtained from the students' university records. The ten content area subscores and composite test score were used from the CTBS, the English, math, social studies, natural science and composite scores from the ACT, and the task, self, impact and total scale scores from the Teacher Concerns Questionnaire. This latter instrument has fifteen items, five in each subscale. Each item is answered on a continuum from not concerned (1) to extremely concerned (5). The Attitude Towards Teaching as a Career Scale provides one score from an eleven-item scale where each item is answered on a strongly agree (1) to strongly disagree (6) continuum with a score of 11 representing the least positive and 66 the most positive attitude. The Teaching Anxiety Scale provides one score and consists of 29 items with each item answered on a continuum from never (1) to always (5) with the lowest possible score of 29 representing very little anxiety about teaching and the highest

possible score of 145 representing extreme anxiety about teaching.

The students also completed a two-page questionnaire requesting various demographic information, such as selected major field of study, assurance of their decision to become a teacher (single item answered on a continuum from very certain [1] to very doubtful [5] about their decision to teach), and how effective they felt they would be as a teacher (single item with a response continuum from not effective [1] to truly exceptional [7] as a future teacher). In addition, each student was asked to check as many as s/he felt appropriate among 15 influences or reasons for choosing to become a teacher; the reasons were: parents, other family or close relatives, former teacher(s), peers or friends, newspaper articles and/or other publications, job security, professional standing of teachers, liking for children/want to help them/work with them, love of a certain subject matter or field, work schedule (short days, short year, vacations, etc.), social prestige, stepping stone to another career, did not know what else to major in, to change society, and prior experience in working with youth.

Results

Other than the chi-square analyses done to ascertain whether the three groups differed on their reasons for becoming teachers, one-way ANOVAS were completed on each of the dependent variable

measures (ACT, CTBS, concerns, anxiety, attitude, assurance in their decision to teach, and perceived effectiveness as a future teacher) with the three types of students (inter-institutional transfer, intra-institutional transfer, and native students) as the independent variable. The results of the ANOVA analyses led to the decision of failing to reject (i.e., "accepting") null hypotheses three, four, five, and seven as the F-ratios related to the three groups of students on the anxiety, attitude, concerns, and assurance of teaching measures were not statistically significant. Null hypotheses one, two, six, and eight were rejected as significant F or chi-square ratios ($p \leq .05$) were computed for these tests or scales: scholastic aptitude (ACT), basic academic skills (CTBS), reasons for deciding to become a teacher, and self-ratings of probable future effectiveness as a teacher.

The ANOVA analyses done on both the academic ability measures, ACT and CTBS, revealed significant mean differences somewhere among the three groups of prospective teachers. Additionally, both of these measures revealed a similar mean pattern of differences among the prospective teacher groups with the intra-institutional transfers performing highest, the native students performing lower, and the inter-institutional transfer students performing the lowest. Significant mean differences among the three groups on the CTBS composite scores ($F = 5.82$,

$p = .003$) and on seven of the ten subtest scores were revealed, as reported on Table 1. The means of the three groups of prospective teachers did not significantly differ, however, on the three language scores (mechanics, expression, and total language). The Scheffe post-hoc pair-wise mean comparison analyses ($p \leq .05$) revealed that the intra-institutional transfers performed significantly higher than did the inter-institutional transfers on six of the eight sets of achievement scores which had resulted in significant F-ratios (see Table 1). The conservative Scheffe tests at the alpha .05 level did not reveal, for any of the CTBS tests, significant mean differences between the native and inter-transfer students nor between the intra-institutional transfer and the native group.

Because of the rather apparent 1-2-3 ordering shown by the intra-institutional transfers, the native, and the inter-institution transfer groups, three additional overall "trend" tests (goodness of fit chi square analyses) were performed with the CTBS means. The first was done between the intra-institution transfer and native student groups; of the 11 possible CTBS mean comparisons between these two groups and under the null hypothesis of no difference, one would expect 5.5 of the intra-institution group means to be higher and 5.5 of these means to be lower than the means of the native group. It was observed, however, that all 11 of the intra-institutional means were

numerically higher than the comparable means of the native group; this situation produced a chi-square of 11.00 (df = 1) which was significant at $p < .001$. It was thus concluded that the intra-institution transfer group showed a significant trend of being superior to the native students for the various skills measured by the CTBS test.

In a similar manner, the second and third "trend" tests performed on the CTBS means compared the intra-institution group means with the inter-institution group means and the native group means with the inter-institution group means, respectively. The chi-square value for the first set of comparisons was 11.0 ($p < .001$) and for the second it was 4.45 ($p = .03$). These latter two ratios led to the conclusion that the "intra" group as well as the native group showed higher overall levels of achievement than did the "inter" group. In summary, these three chi-square tests essentially indicated, in terms of the basic academic skills measured by the CTBS, that the intra-institution transfers were superior to both the native students and inter-institution transfers and that the native students were superior to the inter-institution transfers.

ANOVA analyses done on the ACT scores revealed significant mean differences among the three groups of prospective teachers on three of the four subtest scores and on the composite score ($F = 4.44$, $p = .012$--see Table 1). The Scheffe post-hoc

pair-wise comparisons, however, revealed only one significantly different pair of means; namely, the intra-institutional transfer mean composite score was higher than the composite mean score of the inter-institutional transfer students. It is likely, however, that additional ACT mean differences would have attained statistical significance if scores had been available for all the external transfer students. These scores were available only for 14 of the 48 students as inter-institutional transfers at this institution with sufficient grade-point averages are not required to present ACT scores for admission consideration.

Chi-square goodness-of-fit "trend" tests were also applied to the ACT means (of Table 1). It was observed that the intra-institution transfer group had all five ACT means higher than the means of the native group and that all five of the intra-institution ACT means were also higher than the means of the inter-institution transfer group. If there had been no trend present, we would have expected 2.5 of the intra means to be higher and 2.5 to be lower than the means of the other groups. To check this assumption of no trend, chi-square values of 5.00 ($p < .025$) were computed for both of these implied comparisons which led to the conclusion that the intra-institution transfer group showed superiority to both the native and inter-institution groups on the five ACT scores. In a similar fashion, the chi-square value of 5.00 ($p < .025$) computed between the native

and inter-institution groups led to the conclusion that the native group showed a significant "trend" to be superior to the inter-institution transfer group on the five ACT scores. Thus, both the achievement and aptitude measures (CTBS as well as ACT), it was shown that there was a definite trend for the intra-institution transfer students to be superior to both the native and the inter-institution and also for the native students to be superior to the inter-institutional transfer students.

As reported on Table 2, the ANOVA analyses for none of the three affective measures (attitude, anxiety, and concerns about teaching) revealed significant mean differences ($p \leq .05$) among the three groups of prospective teachers (only the task concerns scale [$F = 2.46$, $p = .086$] revealed a difference even approaching significance). Additionally, the analyses for only one of the two self-rating scales, perceived effectiveness as a future teacher, and for only one of the 15 reasons or influences in deciding to become a teacher, seeing education as a stepping stone to other careers, revealed significant differences among the three groups of students. The inter-institutional transfer students rated (perceived) themselves as being more effective as future teacher ($F = 5.14$, $p = .035$) as compared to the native students, while tending to rate themselves as less assured about their decision to become a teacher although this latter difference only approached significance ($F = 2.27$, $p = .104$).

More explicitly, the Scheffe comparisons revealed no pair-wise mean differences among the three groups relative to assurance about their decision to become teachers and only the pair-wise mean difference reported above relative to the future effectiveness rating was found. With regard to the reasons or motivations for becoming teachers, the only reason resulting in a significant difference among the three groups (3x2 chi-square tests of independence, $\chi^2 = 17.06$, $p < .001$) revealed that proportionally more of the intra-institutional transfer students (23%) as compared to the inter-institutional transfers (14%) and the native students (9%) viewed education as a stepping stone to other careers.

Similar goodness-of-fit chi-square "trend" tests as were applied to the CTBS and ACT means were also applied to the affective means presented in Table 2. None of the three chi-square ratios even approached significance (intra vs. native, $\chi^2 = .50$, $p = .48$; intra vs. inter, $\chi^2 = .14$, $p = .71$; and native vs. inter, $\chi^2 = .50$, $p = .48$). These insignificant trend tests along with the findings of only a single rating difference and only a single reason for entering teacher education revealing significant differences led to the conclusion that the three groups did not differ to any appreciable extent on the entire set of affective measures.

Summary and Discussion

The identification, via the ANOVA analyses, of significant mean differences among the inter-institutional transfer students, the intra-institutional transfer students, and the native students in this sample of 547 prospective teachers on both the aptitude (ACT) and the basic academic skills (CTBS) measures led to the rejection of null hypotheses number one and two. Chi-square analyses of the "trend" of the mean scores for the three groups of students on the five ACT aptitude and eleven CTBS achievement tests revealed a significant pattern of differences with the intra-institutional transfers being most capable, followed by the native students, and both of these groups being more capable than the inter-institutional transfer students.

Conversely, the six affective measures revealed very few significant differences among the three groups of prospective teachers. Only on the perceived probable success as future teacher scale and on one of the 15 reasons for becoming a teacher were significant differences noted among the inter-institutional transfer students, the intra-institutional transfer students, and the native students. This resulted in failing to reject null hypotheses number three (teaching anxiety), four (attitude toward teaching), five (concerns about teaching), and seven (assurance about becoming a teacher) but in rejecting null hypothesis number eight (perceived future teaching effectiveness) and number six

(reasons for becoming a teacher). These very limited differences revealed by the affective measures might suggest at most that the inter-institutional transfers who were found to be the lowest group on the aptitude and achievement tests tended to view themselves as more effective future teachers as compared to the native students; whereas the native students appeared to be most committed to teaching as they were less likely than either of the transfer groups to view teaching as a stepping stone to other careers.

The findings from this study do not lend support to the contention of some researchers that affective or personality type attributes are more effective in differentiating between transfer and native students than are academic variables (Maudal, Butcher, and Mauger, 1974; Parkinson, 1964). This discrepancy in findings may be in part due to the use of different affective measures, changes in transfer students over time, differences between institutional populations, or that affective variables better distinguish between transfers and students within the original program or institution (Marks, 1970) rather than between transfers and students in host institutions which was the setting for the present study.

It appears from this sample of prospective teachers that transfer students as a total group (when combining both intra- and inter-institutional transfers) may not be a great threat to

the quality of candidates preparing to become teachers either in terms of academic or affective attributes. Very few affective differences of any type were noted and aptitude/achievement differences between the native and combined transfer groups were of a minor magnitude. In regard to the aptitude/achievement scores, the findings showed one group of transfers (intra-institutional) scoring higher and one group of transfers (inter-institutional) scoring lower than the native students. However, if we do not look at the combined group of transfer students, the current concerns and tentative misgivings about the "back door" admission practices into teacher training do appear to be valid; for the inter-institutional transfer prospective teachers consistently scored lower than the intra-institutional transfers and the native students on both of the aptitude and achievement batteries.

The findings from other studies would seem to be consistent with selected findings of this study; Marks (1970) noted that most transfers tended to be intra-institutional transfers; Suddarth (1971) reported that regional campus-type transfers (a major subset of this study's pool of inter-institutional transfers) tended to be weaker academically than intra-institutional transfers; two studies reported that transfers had a higher attrition rate (Henderson, McMillan, and Gufford, 1974; Klitzke, 1961); and Parkinson (1964) concluded

that the transfers to and from teacher training tended to reduce the academic quality of teacher candidates. In the present study attrition rates were not studied; however, it was noted that more transfer students (both inter- and intra-institutional) reported seeing teaching as a stepping stone to other careers which might suggest a potentially higher attrition rate from the field of teaching either prior to or following graduation. The inter-institutional transfer student characteristics of lower achievement (CTBS) and aptitude (ACT), potentially higher attrition rate, perhaps an unrealistically higher (when compared to the intra-institutional and native students) expectation of their future effectiveness as a teacher, and a less strong commitment to the teaching field are not likely to be viewed as a reassuring combination of attributes by many teacher trainers.

In conclusion and to the extent that the findings from this institution and the review of related literature are generalizable, it appears that those concerned about the effect of transfer students on the quality (as measured by academic aptitude and basic academic skills) of prospective teachers need to give greater attention to the admission of inter-institutional transfer students than to intra-university transfers. This generalization, of course, would be of most direct concern to those teacher education programs wherein different admission

criteria or procedures are applied to transfer students as compared to initial entrant students.

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Table 1

One-way ANOVAS: CTBS and ACT Scores for Intra- and Inter-Institutional Transfers and Native Students

Comprehensive Test of Basic Skills (CTBS)*

			Group Raw Score Means			
Test	F	p	(1) Intra	(2) Native	(3) Inter	Scheffe***
Vocabulary	4.57	.011	35.13	33.10	33.43	--
Comprehension	8.33	.001	34.24	31.98	31.90	1 > 3
Reading Total	7.23	.001	69.38	65.07	65.33	1 > 3
Spelling	2.99	.05	23.49	22.44	22.43	--
Language Mechanics	1.02	.361	21.49	21.03	20.47	--
Language Expression	2.60	.075	35.78	34.62	34.04	--
Language Total	2.02	.133	57.15	55.62	54.51	--
Math Concepts	4.04	.018	28.13	26.81	24.13	1 > 3
Math Applications	4.03	.018	28.16	26.91	23.98	1 > 3
Math Total	4.36	.023	56.30	53.73	48.10	1 > 3
Total Battery	5.82	.003	182.69	174.33	167.35	1 > 3

American College Test (ACT)**

			Group Raw Score Means			
Test	F	p	(1) Intra	(2) Native	(3) Inter	Scheffe***
English	3.07	.047	21.0	20.0	19.5	--
Math	1.99	.139	19.9	19.6	16.6	--
Social Studies	4.25	.015	21.2	19.3	19.0	--
Natural Science	3.68	.026	23.8	22.4	21.7	--
Composite	4.44	.012	21.7	20.4	19.2	1 > 3

*Native students N = 322, intra-institutional transfers N = 176, and inter-institutional transfers N = 48

**Native students N = 228, intra-institutional transfers N = 111, and inter-institutional transfers N = 14 (institution does not require ACT scores for transfers)

***Scheffe at $p \leq .05$

Table 2

One-Way ANOVAs: Affective Measures for Intra- and Inter-Institutional Transfers and Native Students

	Group Means*					
Scale	(1) Intra	(2) Native	(3) Inter	F	p	Scheffe**
Anxiety	78.6	78.5	78.3	.01	.99	--
Attitude	34.4	34.9	34.4	1.03	.356	--
Concerns:						
Self	16.2	16.0	15.3	.83	.436	--
Task	11.6	12.1	13.0	2.46	.086	--
Impact	18.9	18.6	18.0	.84	.433	--
Total	46.8	46.7	46.2	.05	.95	--
Assurance	1.79	1.68	1.54	2.27	.104	--
Effectiveness	5.26	5.14	5.50	3.38	.035	3 > 2

*Native students N = 323, intra-institutional transfers N = 176, inter-institutional transfers N = 48

**Scheffe at $p \leq .05$